CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER	=	635-253
HARDWARE TESTED:	MA5A T/P 6015B	TEST DATE	=	4/2/92
TEST ENGINEER:	CARL BACA	TEST TIME	=	1228
		TEST DURATION	=	165

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150			
*310			
*273	165	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	1.848	1100 lb
PM	165		400 lb
SOX	//////////	1.0725	60 lb
CO	//////////	2737.35	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289848
HDMSe00360119

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.: 5 BRAVO 1D
HARDWARE TESTED: RS27 VERNIER 338388
TEST ENGINEER: CARL BACA

TEST NUMBER = 629-011
TEST DATE = 4/3/92
TEST TIME = 1128
TEST DURATION = 108

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150	108	X	
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	0.1404	1100 lb
PM	108		400 lb
SOX	//////////	0.0756	60 lb
CO	//////////	201.96	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289849
HDMSe00360120

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA 1	TEST NUMBER =	512-135
HARDWARE TESTED:	MA5A SUSTAINER 6009	TEST DATE =	4/3/92
TEST ENGINEER:	JOHN WELCOME	TEST TIME =	2001
		TEST DURATION =	0

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	0	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	0	70 lb
NOX	//////////	0	1100 lb
PM	0	0	400 lb
SOX	//////////	0	60 lb
CO	//////////	0	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289850
HDMSe00360121

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA 1	TEST NUMBER =	512-136
HARDWARE TESTED:	MA5A SUSTAINER 6009	TEST DATE =	4/4/92
TEST ENGINEER:	STEVE BOMMELJE	TEST TIME =	1716
		TEST DURATION =	68

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	68	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	14.96	70 lb
NOX	//////////	170	1100 lb
PM	68	4.964	400 lb
SOX	//////////	3.128	60 lb
CO	//////////	14286.8	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289851
HDMSe00360122

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA 1	TEST NUMBER	=	512-137
HARDWARE TESTED:	MA5A SUSTAINER 6009	TEST DATE	=	4/6/92
TEST ENGINEER:	JIM BUZZELL	TEST TIME	=	1953
		TEST DURATION	=	301

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	301	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	66.22	70 lb
NOX	//////////	752.5	1100 lb
PM	301	21.973	400 lb
SOX	//////////	13.846	60 lb
CO	//////////	63240.1	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289852
HDMSe00360123

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER	=	635-254
HARDWARE TESTED:	RS27 T/P 2021	TEST DATE	=	4/10/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME	=	1155
		TEST DURATION	=	265

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150			
*310			
*273	265	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	2.968	1100 lb
PM	265		400 lb
SOX	//////////	1.7225	60 lb
CO	//////////	4396.35	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289853
HDMSe00360124

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA 1	TEST NUMBER =	512-138
HARDWARE TESTED:	MA5A SUSTAINER 6010	TEST DATE =	4/10/92
TEST ENGINEER:	STEVE BOMMELJE	TEST TIME =	1430
		TEST DURATION =	297

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	297	X	
318			
***150**			
***310**			
***273**			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	65.34	**70 lb**
NOX	//////////	742.5	**1100 lb**
PM	297	21.681	**400 lb**
SOX	//////////	13.662	**60 lb**
CO	//////////	62399.7	**80,000 lb**

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289854
HDMSe00360125

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA 1	TEST NUMBER	=	512-139
HARDWARE TESTED:	MA5A SUSTAINER 6010	TEST DATE	=	4/11/92
TEST ENGINEER:	CARL BACA	TEST TIME	=	1330
		TEST DURATION	=	140

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	140	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	30.8	70 lb
NOX	//////////	350	1100 lb
PM	140	10.22	400 lb
SOX	//////////	6.44	60 lb
CO	//////////	29414	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289855
HDMSe00360126

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	5 BRAVO 1D	TEST NUMBER =	629-012
HARDWARE TESTED:	RS27 VERNIER 8389	TEST DATE =	4/14/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	1107
		TEST DURATION =	105

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150	105	X	
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	0.1365	1100 lb
PM	105		400 lb
SOX	//////////	0.0735	60 lb
CO	//////////	196.35	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289856
HDMSe00360127

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	4 ALFA 3	TEST NUMBER	=	515-016
HARDWARE TESTED:	RS27 ME 2020	TEST DATE	=	4/15/92
TEST ENGINEER:	JIM BUZZELL	TEST TIME	=	1825
		TEST DURATION	=	52

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318	52	X	
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	11.44	70 lb
NOX	//////////	65	1100 lb
PM	52	20.8	400 lb
SOX	//////////	6.864	60 lb
CO	//////////	4893.2	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289857
HDMSe00360128

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	4 ALFA 3	TEST NUMBER	=	515-017
HARDWARE TESTED:	RS27 ME 2020	TEST DATE	=	4/16/92
TEST ENGINEER:	JIM BUZZELL	TEST TIME	=	1756
		TEST DURATION	=	43

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318	43	X	
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	9.46	70 lb
NOX	//////////	53.75	1100 lb
PM	43	17.2	400 lb
SOX	//////////	5.676	60 lb
CO	//////////	4046.3	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289858
HDMSe00360129

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	5 BRAVO 1D	TEST NUMBER =	629-013
HARDWARE TESTED:	RS27 VE 8390	TEST DATE =	4/17/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	939
		TEST DURATION =	105

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
***150**	105	X	
***310**			
***273**			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		**70 lb**
NOX	//////////	0.1365	**1100 lb**
PM	105		**400 lb**
SOX	//////////	0.0735	**60 lb**
CO	//////////	196.35	**80,000 lb**

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289859
HDMSe00360130

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	4 ALFA 3	TEST NUMBER =	515-018
HARDWARE TESTED:	RS27 ME 2020	TEST DATE =	4/17/92
TEST ENGINEER:	JOE SILVERI	TEST TIME =	1137
		TEST DURATION =	43

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2E	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318	43	X	
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	9.46	70 lb
NOX	//////////	53.75	1100 lb
PM	43	17.2	400 lb
SOX	//////////	5.676	60 lb
CO	//////////	4046.3	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289860
HDMSe00360131

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER =	635-255
HARDWARE TESTED:	RS27 T/P 2022	TEST DATE =	4/20/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	1104
		TEST DURATION =	18

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150			
*310			
*273	18	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	0.2016	1100 lb
PM	18		400 lb
SOX	//////////	0.117	60 lb
CO	//////////	298.62	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289861
HDMSe00360132

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER =	635-256
HARDWARE TESTED:	RS27 T/P 2022	TEST DATE =	4/21/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	1041
		TEST DURATION =	0

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150			
*310			
*273	0	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	0	1100 lb
PM	0		400 lb
SOX	//////////	0	60 lb
CO	//////////	0	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289862
HDMSe00360133

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER =	635-257
HARDWARE TESTED:	RS27 T/P 2022	TEST DATE =	4/21/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	1355
		TEST DURATION =	265

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
*150			
*310			
*273	265	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		70 lb
NOX	//////////	2.968	1100 lb
PM	265		400 lb
SOX	//////////	1.7225	60 lb
CO	//////////	4396.35	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289863
HDMSe00360134

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.: 3 ALFA-1
HARDWARE TESTED: MA5A SUSTAINER 6011
TEST ENGINEER: CARL BACA

TEST NUMBER = 512-140
TEST DATE = 4/22/92
TEST TIME = 952
TEST DURATION = 31

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	31	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	6.82	70 lb
NOX	//////////	77.5	1100 lb
PM	31	2.263	400 lb
SOX	//////////	1.426	60 lb
CO	//////////	6513.1	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289864
HDMSe00360135

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	3 ALFA-1	TEST NUMBER	=	512-141
HARDWARE TESTED:	MA5A SUSTAINER 6011	TEST DATE	=	4/23/92
TEST ENGINEER:	CARL BACA	TEST TIME	=	1053
		TEST DURATION	=	300

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	300	X	
318			
***150**			
***310**			
***273**			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	66	**70 lb**
NOX	//////////	750	**1100 lb**
PM	300	21.9	**400 lb**
SOX	//////////	13.8	**60 lb**
CO	//////////	63030	**80,000 lb**

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289865
HDMSe00360136

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.:	7 BRAVO 2C	TEST NUMBER =	635-258
HARDWARE TESTED:	MA5A T/P 6015A	TEST DATE =	4/28/92
TEST ENGINEER:	MIKE AMBLER	TEST TIME =	1032
		TEST DURATION =	165

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318			
318			
***150**			
***310**			
***273**	165	X	

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////		**70 lb**
NOX	//////////	1.848	**1100 lb**
PM	165		**400 lb**
SOX	//////////	1.0725	**60 lb**
CO	//////////	2737.35	**80,000 lb**

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289866
HDMSe00360137

CALCULATION OF ALFA / BRAVO EMISSIONS PER TEST

A. RECORDED BY TEST ENGINEER

TEST POSITION = NO.: 3 ALFA 1
HARDWARE TESTED: MA5A SUSTAINER 6012
TEST ENGINEER: JIM BUZZELL

TEST NUMBER = 512-142
TEST DATE = 4/30/92
TEST TIME = 1959
TEST DURATION = 31

B. EMMISSION FACTORS (lbs/sec)

NO.		ROC	NOX	PM	SOX	CO
1 -	ATLAS MA-5 BOOSTER (A-1)	0.22	5.40	1.80	0.245	133.4
2 -	ATLAS MA-5A BOOSTER (A-1)	0.45	6.06	2.02	0.275	192.5
3 -	ATLAS MA-5 SUSTAINER (A-1)	0.22	2.50	0.073	0.046	210.1
4 -	DELTA RS-27 (A-3)	0.22	1.25	0.40	0.132	94.10
5 -	ATLAS/DELTA VERNIER (B-1D)	-----	0.0013	TR	0.0007	1.87
6 -	ATLAS SUSTAINER TURBOPUMP (B-2B	-----	0.0075	TR	0.004	11.20
7 -	ATLAS/DELTA TURBOPUMP (B-2C)	-----	0.0112	TR	0.0065	16.59
8 -	CLUSTER TEST (A1)					

C. RUN DURATION GUIDE

(SECONDS)

GUIDE	ACTUAL	<	>
203			
155			
318	31	X	
318			
*150			
*310			
*273			

*** SEE MANAGEMENT IF DURATION WILL EXCEED GUIDE VALUE.**

D. EMISSION CALCULATION THIS TEST

	TEST DURATION (SEC)	EMISSIONS PER TEST (lbs)	MAXIMUM HOURLY PERMITTED
ROC	//////////	6.82	70 lb
NOX	//////////	77.5	1100 lb
PM	31	2.263	400 lb
SOX	//////////	1.426	60 lb
CO	//////////	6513.1	80,000 lb

CLUSTER TESTING: ADD BOOSTER AND SUSTAINER VALUES (NO INCREASE IN LIMIT) ENTER HERE-

	EMMISSION PER TEST (lbs)
ROC	
NOX	
PM	
SOX	
CO	

E. REMARKS:

BNA00289867
HDMSe00360138